

THE VALUE FOR SOCIAL PSYCHOLOGY OF THE CONCEPT OF INSTINCT¹

WESLEY RAYMOND WELLS

LAKE FOREST COLLEGE

IN view of a recent tendency among certain psychologists to deny the existence of human instincts in any proper sense of the term, I propose to attempt a brief review of the instinct theory, with special reference to its meaning and value for social psychology. My own position may be indicated at the outset by a quotation from Professor Dewey's address given before the American Psychological Association in New York, December, 1916. In this address Professor Dewey traced some of the chief steps in the development of social psychology, as follows: "It would be ungrateful to engage in any discussion of the past and future of social psychology without recalling a few rich pages of the *Principles* [James' *Principles of Psychology*] which are devoted to the social self, and, in the discussion of instincts, to the native reactions of human beings in the presence of one another. . . . I hope I may find general agreement in pointing to the work of McDougall and Thorndike respectively as indicative of the next great force [following the work of Tarde] in social psychology, together with such writings as those, upon the social side, of Graham Wallas. . . . The problem was presented . . . as the problem of the relationship of original or native activities to acquired capacities and habits. *Henceforth our social psychology is placed upon the sure ground of observation of instinctive behavior.*" (*Psychological Review*, Vol. 24, pp. 266-68. Italics mine.)

Professor Dewey's prophecy as stated in the last sentence quoted above is being fulfilled so far as the main line of emphasis in social psychology is concerned. However, the instinct theory is being subjected to criticisms of which account must be taken. There are two principal types of opposition to the instinct theory. In the first place, for the purpose of discrediting the instincts an alleged analogy has been pointed out between instinct psychology and the discarded faculty psychology. If this analogy were exact, it would be

¹ [Editorial Note: The present article will be followed in a short time by another in which Dr. Wells promises to develop his theory of the effect of the environmental factors in inherited traits by bringing forth additional biological evidence.]

fatal to the cause of instinct. In the second place, the claim has been made that, in the human animal at least, all behavior which, under the influence of such psychologists as James and McDougall, has been commonly called instinctive, is in reality behavior of the acquired type and hence a matter of habit rather than of instinct.

Mr. Field has made an analysis ("Faculty Psychology and Instinct Psychology," *Mind*, N. S. Vol. 30, pp. 257-70) of the instinct problem in the effort to convict instinct psychology of "the Fallacy of Faculty Psychology of attempting to describe what we know in terms of what we cannot know" (*ibid.*, p. 270). Dr. Allport speaks of this fallacy, saying that text-books of social psychology still cling to the faculty psychology in their acceptance of social instincts (*This Journal*, December, 1919, p. 297). Mr. Field distinguishes between instinct and the instincts. He accepts the notion of instinct, defined "as something in our innate mental structure of which all that we can say is that by virtue of it a person or an animal performs certain actions without previous experience and without foresight of the end" (*ibid.*, p. 259). He admits that "to say . . . that an action is instinctive or due to instinct gives us valuable information" (*ibid.*). But the Fallacy of Faculty Psychology is committed, he insists, as soon as we go beyond instinct and begin to speak of particular instincts. "What information does it convey to us," he asks, "when we are told that a certain action is due not only to instinct but to some particular instinct?" (*Ibid.*) As will be shown more fully below, however, there is a definite explanatory value in the concepts of the special instincts. To ascribe a person's responses in a given instance to the particular instinct of pugnacity, for example, is to say more than that he fights because he fights: it is to say that the person's present response is due to the existence in his nervous system of synaptical connections which are inherited; and it is further to explain in part why man at the present time possesses these inherited synaptical connections. It says by implication that the mutations resulting in the structures underlying the fighting instinct had survival value during probably millions of years of ancestral life, human and pre-human. Man's present response is explained in this case by a description of one of the prominent aspects of remote ancestral life. We are the "heirs of all the ages" in respect to this instinct just as in respect to other specific instincts. One can understand present human behavior only if one constantly looks beneath the surface appearance of responses acquired through the educative influences of civilized

society and sees the ever-present background of behavior characteristic of man's savage and animal ancestry.

The second criticism of the instinct theory, as I have indicated, is the claim that the responses commonly attributed to instincts are really acquired responses, and therefore habits rather than instincts. Thus Dr. Allport says, "The 'instinct fallacy' errs in injecting social experience and habit into the germ-plasm" (*Psych. Bulletin*, Vol. 17, p. 87). Mr. Kuo says, "In the present paper we attempt to deny not only the classification of instincts, but their very existence" (*Jour. of Philos.*, Vol. 18, p. 648, note). Mr. Ayres, speaking of human instincts, says, "There is nothing of the sort in human behavior" (*ibid.*, p. 564). Professor Kantor affirms: "Human instincts . . . in the adult individual are completely absent. . . . Mature persons possess no instincts" (*Psych. Rev.* Vol. 27, pp. 52, 56). And Mr. Bernard says: "The most cursory analysis of the origin of the action-patterns involved in such so-called instincts as the parental instinct, reproductive instinct, fighting instinct, instinct of self-preservation, the gregarious instinct, and the like will show that by far the majority of the action content is acquired" (*ibid.*, Vol. 28, p. 102).

The last two psychologists cited, however, do not deny completely the existence of human instincts. Thus Mr. Bernard says: "The actual instincts are at once much simpler and more elemental and much more numerous than those set forth in the classifications of such writers as McDougall, Thorndike, and other psychologists. There are probably hundreds or even thousands . . . of these inherited mechanisms" (*ibid.*, p. 109). Professor Kantor's position is not unlike Mr. Bernard's on this point, for Professor Kantor recognizes what he calls "instinctive behavior," that is, acquired complex action-patterns developed from "the acts which are properly called instincts" (*ibid.*, Vol. 27, p. 50). What Mr. Bernard and Professor Kantor here refer to as instincts are what would ordinarily be called reflexes rather than instincts, however. In fact, Mr. Bernard admits that he includes reflexes among instincts. Some psychologists, however, as has been shown, deny completely the existence of even the simplest human instincts, apparently believing that no synaptical connections can be inherited.

Both those who deny the existence of human instincts outright and those who accept them in the sense in which Bernard and Kantor accept them, would reject entirely such a position as that of Professor

Hunter when, though giving due recognition to habit-formation, he finds in addition a place for a limited number of complex human instincts which arise wholly through heredity, appearing either at birth or, as is the more usual case, at some time after birth. Professor Hunter admits the fact of modification of instinct by habit, not only after, but often before, the appearance of the instinct; but he denies that all complex action-patterns are habits. Thus he says that in many cases "certain habits or customs have been fixed upon the individual before the normal time for the instinct to appear. Therefore when the instinct manifests itself, it does so from the very beginning in modified form. . . . The modifications of instinctive performance are not all variations . . . produced after the instinct first appears. . . . Other modifications occur because of influences at work before the instinct makes its initial appearance" (*ibid.*, Vol. 27, pp. 252, 255). Such is the position which I would maintain, namely, that over and above habits, due solely to environmental conditions, there are instincts, which are inherited action-patterns.

I would define instinct as Watson does, calling it "an hereditary pattern reaction, the separate elements of which are movements principally of the striped muscles" (*Psychology*, p. 231). Watson admits that there is no sharp line of separation between instinct and emotion, though in the definition of emotion he lays special though not exclusive emphasis upon the visceral and glandular systems involved (*ibid.*, p. 195), and in instinct he places special but not exclusive emphasis on responses of striped muscles. Since emotions, considered in their physical aspect, as well as instincts are hereditary *reaction-patterns*, and especially since the visceral responses involved in emotion constitute an important source of internal stimulation for definitely instinctive responses involving the skeletal muscles, as in the case, for example, of fear, anger, and the sexual emotion, it certainly does not seem feasible to attempt too sharp a division between instinct and emotion. When one compares Dr. Cannon's adrenal theory of the emotions with the view of instinct which ascribes to instinct the chief motivating power in human behavior, as, for instance, in McDougall's theory, one is prompted to ask whether this instinct theory may not find its correct explanation partly in the adrenal theory of the emotions. A great amount of energy for human achievement is supplied during emotional stress through the effect of adrenalin in liberating sugar from the liver, neutralizing fatigue products in the muscles, and increasing the blood pressure. At any rate Dr. Cannon

has contributed evidence that emotion and instinct cannot profitably be considered separately.²

Much of the opposition to the instinct theory arises from the belief among some psychologists that by instinct is meant some mysterious force inaccessible to scientific explanation. The position taken by Mr. Jacques Loeb, however, shows that it is possible for a mechanistic biologist, without recourse to non-scientific principles, to conceive of the existence of instincts as complex as the food instinct, the sex instinct, the parental instinct, locomotion, gregariousness, and even the instinct of workmanship, all of which he mentions.³ Loeb accepts such hereditary action-patterns as facts, and says that the physico-chemical analysis of them is only a question of time. Regarding the hereditary aspect of instinct he says: "The analysis of the instincts given in the previous chapter places us in a position to answer the question as to how they can be transmitted through the egg. . . . The form and instincts of the full-grown animal are only the resultant of a few simple elements which can readily be transmitted through the egg" (*Physiology of the Brain*, pp. 201, 202).

Much of the confusion regarding the question of the inheritance of instincts arises from a failure to get clear concepts and to use precise terms in discussing the mechanism of heredity. The inheritance of so-called characters, or characteristics, is determined not by germinal factors alone, but by these together with environmental conditions that are normally present during at least a part of the time of individual growth. It is the factors in the germ-plasm, which Weismann called determinants and which Johannsen calls genes, that are transmitted from generation to generation. Characters as such are *never transmitted*, they are *all* "acquired" anew during the lifetime of the individual. But some characters we call hereditary, namely, those which are "acquired" as a result of germinal factors and constant environmental conditions. The environment, so far as separate parts of the organism are concerned, may be either external or internal to the organism as a whole. Now action-patterns which are called instincts, just like other hereditary characters, are inherited because of the two sets of conditions, namely, the transmission of germinal factors and the constancy of certain environmental stimuli during

² See W. B. Cannon, *Bodily Changes in Pain, Hunger, Fear and Rage*, especially pp. 188ff.

³ See *The Mechanistic Conception of Life*, pp. 30, 31; *The Physiology of the Brain*, pp. 194, 197, 242; *Forced Movements, Tropisms, and Animal Conduct*, Ch. 18.

the development of the individual. The environmental stimuli required in co-operation with the germinal factors are to a large extent internal in the case of the instincts. As Professor Goodrich said in his presidential address before the British Association for the Advancement of Science, Edinburgh, September, 1921: "Instinctive behavior is carried out by a mechanism developed under the influence of stimuli, chiefly internal, which are constantly present in the normal environmental conditions. . . . Hence [it] is inherited" (*Science*, Vol. 54, p. 537).⁴

We should keep clearly in mind that it is only determinants (now more frequently called determiners), not characters, which are transmitted in the germ-plasm, and that *all* characters are "acquired" during the growth of the individual; though some of these characters are determined by germinal factors (plus environmental stimuli, external or internal). At the end of fertilization, when the transmission of germinal factors has already taken place, there is not present a single character. But none of those who object to calling instincts inherited, since they are "acquired" during individual growth, object to calling hair- or eye-color, for example, hereditary, although the "acquisition" of such characters during the development of the individual is obvious. The chief error in the view of many psychologists who deny that there are inherited action-patterns rests upon a failure to observe that not only all action-patterns, but *all* structural characters whatsoever, are "acquired" in the sense that none of them, since they are somatic, not germinal, structures, are present in the germ-plasm at the end of fertilization. It is true that all racial instincts are "learned," in one sense of the term, by the individual during pre- or post-natal development, but so are all other hereditary characters "learned," or "acquired," in a similar manner.

There is little doubt that many action-patterns involving the autonomic nervous system and the unstriped muscles are inherited. Thus what are commonly called emotions, such as fear, anger, the sexual emotion, etc., when considered in their physical aspect are clearly hereditary action-patterns. But, admitting this, one must admit the further fact that the visceral and glandular responses which constitute the physical side of the emotions are themselves internal stimuli, which have been operative from the time of primeval savagery,

⁴ Professor Goodrich's article, "Some Problems in Evolution, pp. 529-538, contains a valuable discussion of problems of heredity. See also Babcock and Clausen, *Genetics in Relation to Agriculture* (New York, 1918), pp. 20ff.

and before, down to the present, making possible the inheritance of action-patterns which involve the skeletal muscles and which are called instincts in the strict sense of the term. The visceral and glandular responses involved in the emotions have been constant in the midst of changing external environmental conditions; and this constancy of internal environmental stimuli has co-operated with germinal factors in producing among individuals in civilized society *some*, at least, of the same hereditary responses of skeletal muscles as those which characterized the instincts of pugnacity, flight (or concealment), etc., in the life of our remote ancestors.

Moreover, many of the external environmental stimuli have existed in ancestral life down to the present time in unchanged form, thus making possible the inheritance of action-patterns dependent in part on external stimuli. James, McDougall, and others have pointed out the chief stimuli that call forth the instinct-emotion of fear, namely, strange objects, intense stimuli such as loud noises, etc. Now such external stimuli are constant factors of any conceivable environment, savage or civilized. Watson and McDougall have singled out interference with one's activities, the "hampering of the infant's movements" (Watson, *op. cit.*, p. 200), the "opposition to the free exercise of any impulse" (McDougall, *Introduction to Social Psychology*, 5th edition, p. 59), as the constant external environmental condition which arouses the instinct-emotion of anger. The presence of inferiors, a situation where one is in some respect superior to the group (McDougall, *op. cit.*, p. 64), is the constant external environmental factor in the case of the instinct of self-assertion. The presence in groups of others of the same species has been a constant external environmental factor in the case of the instinct of gregariousness. Thus one might go on for other instincts, such as those of self-abasement, of curiosity, the parental instinct, the sexual instinct, etc., and might point out ever-present external environmental stimuli for each of them.

For convenience, and in order to accord with the most common usage among psychologists of the terms "acquired" and "hereditary," we may continue to apply simply the term "hereditary" to those characters the "acquisition" of which during the individual's development is inevitable from the fact that it is dependent both on determiners transmitted through the germ-plasm and on constant environmental conditions; and we may apply the term "acquired" to those characters which are not inevitable since they may or may not appear

in individual development inasmuch as their appearance depends on environmental conditions alone, and on environmental conditions which are not constant. Thus, conforming to the common though not the strict present-day scientific usage of the terms "acquired" and "inherited," we may say that habits are acquired while instincts are inherited. Instincts are all "acquired," but only in the sense in which all hereditary characters whatsoever are "acquired."

Those who assert that there are no human instincts properly so called, those who deny that there are inherited action-patterns, are asked to account for the following facts of behavior as they are recorded, on the basis of extensive observations, by Darwin in *The Expression of the Emotions in Man and Animals* (The references are to the New York edition of 1886):—

"Rage, anger, and indignation are exhibited in nearly the same manner throughout the world" (p. 247). "Young children when in a violent rage roll on the ground on their backs or bellies, screaming, kicking, scratching, or biting everything within reach. So it is with the young of the anthropomorphous apes" (p. 241). Anger mixed with the attitude of defiance or sneering, as is well known, often expresses itself by "the upper lip being retracted in such a manner that the canine tooth on one side of the face alone is shown" (p. 249). "The action is the same as that of a snarling dog" (p. 251).

Darwin accounts for the sneer as follows: "The expression . . . of a playful sneer or ferocious snarl . . . reveals [man's] animal descent; for no one, even if rolling on the ground in a deadly grapple with an enemy, and attempting to bite him, would try to use his canine teeth more than his other teeth. We may readily believe from our affinity to the anthropomorphous apes that our male semi-human progenitors possessed great canine teeth. . . . We may further suspect . . . that our semi-human progenitors uncovered their canine teeth when prepared for battle, as we do still when feeling ferocious, or when merely sneering at or defying some one, without any intention of making a real attack with our teeth" (p. 253).

"As the sensation of disgust primarily arises in connection with the act of eating or tasting, it is natural that its expression should consist chiefly in movements round the mouth" (p. 258). "From the answers received from my correspondents it appears that the various movements which have now been described as expressing contempt and disgust, prevail throughout a large part of the world" (p. 260).

"With respect to fear, as exhibited by the various races of man,

my informants agree that the signs are the same as with Europeans" (p. 294). "We may . . . infer that fear was expressed from an extremely remote period in almost the same manner as it now is by man; namely, by trembling, the erection of the hair, cold perspiration, pallor" (p. 362).

In summarizing his discussion of the expression of the emotions and instincts Darwin says: "All the chief expressions exhibited by man are the same throughout the world" (p. 361). "That these . . . gestures are inherited, we may infer from their being performed by very young children, by those born blind, and by the most widely distinct races of man" (pp. 352, 353) [and by many of the animals, as Darwin says elsewhere]. "Whenever the same movements of the features or body express the same emotions in several distinct races of man, we may infer with much probability that such expressions are true ones, — that is, are innate or instinctive" (p. 15).

With the advent of Darwinism a half-century and more ago man for the first time came to be recognized distinctly as an animal. It is possible, of course, to overemphasize the animal-like aspect of human nature; but with certain psychologists at the present time there seems to be a tendency to react against the sane teachings of biology, and to emphasize too much the gulf between man and the animals. This tendency is illustrated especially by some of those who deny wholly or in part the existence of human instincts. Thus Ayres says, "The human species is not wild" (*Jour. of Philos.*, Vol. 28, p. 604). Now one does not have to go even to the trouble of observing the life of savages in the jungle to find evidence that man is rather "wild" after all. The observation among civilized peoples of mob-action in strikes, race riots, and even in some forms of popular religious revivals (See Davenport, *Primitive Traits in Religious Revivals*) reveals many traits of genuine animal "wildness" in man. Ayres says: "The dictionary compresses the characteristic activity of the orang into four lines; what, could it say, are the normal acts of man?" (*Ibid.*, p. 603.) The answer to this question, of what are the normal acts of man, can almost be summarized adequately in four *words*, as follows: To eat, create, procreate. Schiller said that hunger and love, sexual and parental, are the fundamental human motives. Certainly only half-a-dozen other deep-rooted motives need to be recognized in addition to these, and chiefly subordinate motives at that, in order to account for most of the behavior of man in the creation of his institutions. Ayres says, "When instincts fall out, institutions get their due. . . .

The social scientist has no need of instincts; he has institutions" (*ibid.*, pp. 561, 565). Now if instincts *should* fall out, institutions could not continue to exist; and without the motivating force of the instincts in direct or (and especially) in sublimated form, the characteristic human institutions could not have arisen. And instead of saying that the social scientist has no need of instincts since he has institutions, we are forced to say that the social scientist must measure the soundness of institutions in terms of their fitness to satisfy the demands of the human instincts.

A social psychology that does not base itself upon the instinctive motives of mankind is not getting down to fundamental principles. Due recognition, of course, needs to be made of the great part played in human life by habit-formation, or by education in the broad sense of the term, and by the arts of civilized society. The power of reason, too, belongs probably to man alone of all the animals. As Veblen says, however (*The Instinct of Workmanship*, p. 6), "Men take thought, but the . . . racial endowment of instinctive proclivities decides what they shall take thought of, and how and to what effect."